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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/049,436

07/22/2002

Helen Dukes

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05/01/2006

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/049,436 | <b>Applicant(s)</b><br>DUKES ET AL. |  |
|                              | <b>Examiner</b><br>Minh-Chau T. Pham | <b>Art Unit</b><br>1724             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by any one of the Chinese Patent (CN 1125631), CN (1038392) and the Japanese Patent (JP 11253716).

Any one of the Chinese reference (-631), the Chinese reference (-392) and the Japanese reference teaches an air filter medium comprising an antimicrobially agents which can entrap living germs within the filter and may proliferate due to variation in humidity. The filter medium formed by synthetic fiber filaments, nonwoven fabric or paper fabric, and an air filter medium comprising woven or nonwoven materials with antimicrobially effective amount of antimicrobial agents. Any one of the Chinese reference (-631), the Chinese reference (-392) and the Japanese reference further teaches the filter medium comprising a microbiologically effective amount of a polymeric biguanide or salt, wherein the polymeric biguanide contains at least two biguanide units in which the polymeric biguanide is poly(hexamethylene biguanide). A copy of the translation in English of these 3 foreign documents is provided for Applicant's use, wherein the references show the chemical structure of the antimicrobial material comprising at least two biguanide units, as claimed.

***Response to Arguments***

Applicant's arguments filed on August 11, 2005 have been fully considered but they are not persuasive.

Applicant argues that none of the cited references Kunisaki et al, Coombs et al or Woo et al discloses an air filter medium containing antimicrobial agents with biguanide compounds. The Examiner now drops all the prior arts Kunisaki et al, Coombs et al or Woo et al, and newly introduces any one of the Chinese Patent (CN 1125631), CN (1038392) and the Japanese Patent (JP 11253716) under the 102(b) rejections of claims 1-14 to show an air filter medium comprising an antimicrobially agents which can entrap living germs within the filter and may proliferate due to variation in humidity. The filter medium formed by synthetic fiber filaments, nonwoven fabric or paper fabric, and an air filter medium comprising woven or nonwoven materials with antimicrobially effective amount of antimicrobial agents. Any one of the Chinese reference (-631), the Chinese reference (-392) and the Japanese reference further teaches the filter medium comprising a microbiologically effective amount of a polymeric biguanide or salt, wherein the polymeric biguanide contains at least two biguanide units in which the polymeric biguanide is poly(hexamethylene biguanide). A copy of the translation in English of these 3 foreign documents is provided for Applicant's use, wherein the references show the chemical structure of the antimicrobial material comprising at least two biguanide units, as claimed.

Applicant's arguments with respect to claims 1-14 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Minh-Chau Pham**  
**Patent Examiner**  
**Art Unit: 1724**  
**April 27, 2006**